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May 22, 1997

VIACOM

William F. Caton
Acting Secretary
Federal Communications Commission
1919 "M" Street, Northwest
Room 222
Washington, D.C. 20554

RE: Written/Oral Ex Parte Presentations to Bruce Franca, Robert Eckert and Robert Bromery
Office of Engineering and Technology
MM Docket No. 87-268, Advanced Television Systems (Sixth Report and Order)

Dear Mr. Caton:

On May 16, 1997, Viacom Inc. ("Viacom") sent to Bruce Franca, Deputy Chief, Office of Engineering and Technology ("OET"), a letter containing a list of questions relating to the Commission's recently released Sixth Report and Order in the above-captioned rule making proceeding. Subsequently, on May 21, 1997, representatives of Viacom met with representatives of OET via telephonic conference. The representatives of Viacom were Kevin Busselman, Paul Heimbach, Anne Lucey, Ellen Schned, Edward Schor, and Viacom's consulting engineer Dane Ericksen of Hammett & Edison, Inc. The OET representatives were Bruce Franca, Robert Eckert and Robert Bromery. The nature and scope of the May 21, 1997 oral presentation was limited to questions contained in the May 16, 1997 letter to Mr. Franca. A copy of that letter is attached.

The proceeding at issue is a non-restricted proceeding in which presentations are permitted, but must be disclosed. Accordingly, this letter and a copy (including the attached May 16, 1997 letter to Mr. Franca) are being filed pursuant to Section 1.1206 of the Commission's Rules.

Sincerely,

Ellen Schned

Ellen J. Schned

Enclosure

cc: Bruce Franca (w/o enclosure)
Robert Eckert
Robert Bromery

Ellen J. Schned
Vice President
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Tel 202 785 7300
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May 16, 1997

VIACOM

Mr. Bruce Franca
Deputy Chief
Office of Engineering
and Technology
Federal Communications Commission
2000 "M" Street, Northwest
Suite 480
Washington, D.C. 20554

Dear Bruce:

Attached are questions we have concerning the DTV Allotment Order. Your input would be greatly appreciated. I would like to set up a conference call early next week, as your schedule permits.

In addition to the questions attached, we would like your views on the following:

1) What is the earliest we can file for maximization? What is the earliest we can maximize - once we file for a license or sometime prior?

2) What is the maximization criteria?

3) What type of flexibility will there be within the "no new interference" restriction for maximization? Does this apply to the NSTC as well as the digital channel? Will you consider factors such as whether the interference in the outer fringes of the grade B contour verses the grade A contour?

We appreciate your input Bruce, and look forward to speaking with you. I will contact you shortly to set up a conference call. Of course, you can reach me at (202) 785-7300.

Sincerely,

Ellen Schned

DTV Allocations Questions

1. Are all terrain-sensitive interference studies to be truncated by the protected station's F(50,50) Grade B contour (for NTSC stations) and by either that or the protected station's F(50,90) DTV Threshold contour (for DTV stations)? That is, is the universe for determining interference using a terrain-sensitive propagation model a truncated universe?

2. Page B-1 of Appendix B states that technical parameters for determining the Grade B contour of NTSC stations were taken from the FCC TV Engineering Data Base. Yet that data base does not include data on the station's elevation pattern, or whether electrical or mechanical beam tilts are employed. Especially at UHF, where half-power beamwidths of 1.5–2.0° are typical, the 90% rule of Section 73.684(c)(2) can easily be triggered, which in turn will affect the distance to the station's Grade B contour. Where mechanical beam tilt is additionally used, the station's Grade B contour can be greatly "distorted" from that obtained ignoring the elevation pattern. Therefore, it would appear that there were many cases where the OET algorithm did not correctly project a station's Grade B contour. For purposes of interference studies made on behalf of stations wishing to demonstrate that modified DTV facilities would not cause greater interference, will the Commission similarly accept studies that simply ignore the effects, if any, of a station's elevation pattern?

3. Page B-1 of Appendix B states that a dipole factor has been adopted for UHF DTV thresholds, but this is not reflected in the new Section 73.622(e), which specifies a uniform threshold of 41 dBu for UHF TV stations. If a dipole factor is to be used, it needs to be reflected in the new rules.

4. If a UHF dipole factor is adopted with adjustments of as small as ±0.1 dB (DTV Channels 37/39 versus the mid-band DTV Channel 38), then it makes no sense to not also apply a dipole factor for VHF lowband DTV channels; for example, DTV Channel 2 relative to midband DTV Channel 4 would have a dipole factor of -1.7 dB, and DTV Channels 7 and 13 relative to midband DTV Channel 10 would have dipole factors of ±0.9 dB. If UHF dipole factors of as small as ±0.1 dB must be considered, how can VHF dipole factors of ±0.9 dB and -1.7 dB be ignored?

5. Page A-3 of Appendix A lists the lowband, highband, and UHF DTV Thresholds as 37, 44, and 50 dBu. Elsewhere in the R&O the DTV Thresholds are listed as 27.8 or 28 dBu, 35.8 or 36 dBu, and 40.8 or 41 dBu. Which are the correct numbers? Are the DTV thresholds to be calculated to the nearest 0.1 dB or to the nearest dB?

6. Section 73.622(e) specifies that the Longley-Rice model must be used, yet the OET Bulletin 69 also described in that rule section as providing guidance in how to use that model does not yet exist. Therefore, it is virtually impossible to know exactly what operating parameters for "Longley-Rice" are being used, or how one obtains "some modifications to the code ... described by G.A. Hufford in a memorandum to users of the model dated January 30, 1985." Besides apparently violating the Administrative Procedures Act by taking an action not discussed or even suggested in the NPRM, *i.e.*, mandating a particular terrain-sensitive propagation model, how can the Commission proceed with effective dates for DTV when a critical document broadcasters must use to evaluate their interference conditions has not yet even be written, much less circulated for review? Will the effective dates be stayed until OET 69 is in fact published, as was done for the RFR rule making (ET Docket 93-62 and OET 65)?

7. Paragraph 215 states that DTV stations must protect NTSC stations removed by ±14 and ±15 channels from the DTV channel, yet Appendix A, Page A2, shows protection ratios only for +14 and +15 channels, as does the new Section 73.623(c)(2). We assume that only NTSC stations 14 or 15 channels *above* the DTV station need be protected.

8. California Amplifier, a company providing ITFS/MMDS "wireless cable" down-converters in large quantities, offers a downconverter (Model No. 13001) with a 1.5 dB noise figure in a 6 MHz wide NTSC channel. If such active devices are priced so as to be commercially practical to install at thousand of subscriber receive sites, then why does the Commission think that the consumer electronics industry will only be capable of producing DTV receivers with noise figures of 7 dB at UHF and 10 dB at VHF? And why would the noise figure of a DTV receiver's tuner be worse at VHF than at UHF?